Louisville Metro Air Pollution Control District
701 West Ormsby Avenue
Louisville, Kentucky 40203-3137

Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-0465-17-F

Plant ID: 0465

Effective Date: 5/4/2017

Expiration Date: 5/31/2022

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Owner: Universal Minerals Kentucky Inc.
Source: Universal Minerals Kentucky, Inc. – Louisville Plant
8250 Port Road
Louisville, Kentucky 40258

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve (12) months and no later than ninety (90) days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant: PM_{10}
Tons/year: < 25

Application No.: See Table

Permit Writer: Elise Venard

Date of Public Notice: 05/07/2016; 03/30/2017

Air Pollution Control Officer

May 4, 2017

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FEDOOP Permit Revisions/Changes

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	0080-01-F	11/05/2001	6/03/2001	Initial	Entire Permit	Initial Permit Issuance
NA	O-0465-17-F	05/04/2017	05/07/2016; 03/30/2017	Renewal	Entire Permit	Permit renewal to include the incorporation of construction permits and STAR exempt status

Construction Permit History:

Permit No.	Effective Date	Description
442-07-C	8/31/2008	Construction permit for load-out station
C-0465-1004-16-F	6/13/2016	Powerscreen Chieftain aggregate sorting screen (200 tph) with mobile diesel engine (66.2 hp)

Applications and Related Documents

Document Number	Date Received	Description
12933	7/31/2006	Hardcopy: FEDOOP application
57182	7/11/2013	Hardcopy: Permit modification for emission limit change
71842	2/28/2015	Hardcopy: Form 100A for Construction application with Permit modification to include
71424	5/21/2015	Hardcopy: Form 100P declaring Insignificant Activities
73427	9/14/2015	Hardcopy: Form 100A for the addition of a Responsible Official
75370	1/6/2016	Email: APCD notice to company of the initial draft permit review period before going to public comment (1/6/2016 – 1/21/2016)
75370	1/26/2016	Email: Company comments after review of draft permit O-0465-16-F
75370	1/27/2016	Email: District response to company comments
75370	1/29/2016	Email: Company submission of additional information regarding comments to draft permit O-0465-16-F
75370	2/1/2016	Email: APCD acceptance of additional information regarding company comments to draft permit O-0465-16-F
75370	2/8/2016	Email: Company comments after review of draft permit O-0465-16-F
75602	3/1/2016	Email: Company submitted copy of the Secretary of State Certification
75954	3/18/2016	Email: Company response and equipment information confirmation
76005	3/23/2016	Permit application for second additional equipment
76452	4/15/2016	Email: APCD notice to company of the initial draft permit review period before going to public comment (4/15/2016 – 5/2/2016)
77041	5/6/2016	Email: Public notice for draft permit O-0465-16-F
77602	6/2/2016	Email: Public comments on draft permit O-0465-16-F
77648	6/7/2016	Email: Response to public comments on draft permit O-0465-16-F and APCD approval for PM Stack Testing period (6/7/2016 – 10/5/2016)
77764	6/13/2016	Email: Delivery of Construction Permit C-0465-1004-16-F to the company
79457	9/19/2016	Hardcopy: Form 100A for the addition of a Responsible Official
79524	9/19/2016	Email: APCD approval for an extension to perform PM Stack testing (10/5/2016 – 11/5/2016)
80175	10/26/2016	Email: APCD approval for a second extension to perform PM Stack testing (11/5/2016 – 11/14/2016)

Document Number	Date Received	Description
80270	11/1/2016	Hardcopy: PM Stack Test Protocol
80313	11/3/2016	Email: Comments to proposed PM Stack Test Protocol
80367	11/7/2016	Email: PM Stack Test protocol approved
81301	1/12/2017	Email: Reminder to company of PM Test Results due date
81300	1/13/2017	Email: Notice to the company that the test results are incomplete and invalid as submitted
81395	1/20/2017	Hardcopy: Particulate Matter Compliance Test Report (Revision 1)
81365	1/20/2017	Email: Inadequate PM Test Report Certification
81376	1/20/2017	Hardcopy: PM Test Report Certification Statement
81748	2/6/2017	Email: Stack test report
82045	2/21/2017	Email: Method 5 PM test results
82154	2/27/2017	Email: APCD approval of a portion of the PM Stack Test results

Abbreviations and Acronyms

AP-42	- AP-42, *Compilation of Air Pollutant Emission Factors, published by U.S.EPA*
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
HCl	- Hydrogen chloride
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
NAICS	- North American Industry Classification System
NO_x	- Nitrogen oxides
PM	- Particulate Matter
PM_{10}	- Particulate Matter less than 10 microns
$PM_{2.5}$	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO_2	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.

2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.

3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-0.

5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.

6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.

8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.

9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in Section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.

10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM_{10}, $PM_{2.5}$, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; or any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.

11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.

12. Unless specified elsewhere in this permit, the owner or operator shall submit annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All annual compliance reports shall include the following per Regulation 2.17, section 3.5.

    - A certification statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete", and
    - The signature and title of a responsible official of the company.

    The report must be postmarked no later than March 1 of the year following the calendar year covered in the annual report

13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emissions Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions

Regulation	Title
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.17	Federally Enforceable District Origin Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions

14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Fees
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption of Federal New Source Performance Standards

15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.

16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.

17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

Air Pollution Control District
701 W. Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

Emission Unit: Plantwide

Plantwide Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	2.4
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2

Plantwide Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **PM_{10}**

i. The owner or operator shall not allow the plantwide PM_{10} emissions to equal or exceed twenty five (25) tons during any consecutive twelve (12) month period. [1] (Regulation 2.17, section 5.1)

ii. No owner or operator shall cause or permit the discharge of visible fugitive emissions beyond the lot line of the property on which the emissions originate. (Regulation 1.14, section 2.4)

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **PM_{10}**

i. The owner or operator shall monthly maintain records that show the quantity (in tons) and type of material processed during each calendar month and consecutive 12-month period.

ii. The owner or operator shall calculate the PM_{10} emissions based on the material throughput in tons, stack test data, and emission factors from (or derived from) AP-42, Chapter 11 Section 11.19.2-2 Emission Factors for Crushed Stone Processing Operations; Section 11.24-2 Emission Factors for Metallic Minerals Processing; and Chapter 13 Section 13.2.4 Aggregate Handling and Storage Piles shown in the Table below, unless another method is approved in writing by the District.

[1] This facility has the potential to be a major source of PM_{10}. Opting to become a synthetic minor source and limiting PM_{10} emissions to 25 tpy allows this facility to avoid both Major status and STAR requirements.

Table 1: PM10 Emission Factors

Emission Source	Uncontrolled PM_{10} Emission Factor (lb/ton)	Controlled PM_{10} Emission Factor [2] (lb/ton)
Crushing	0.0024	N/A
Screening	0.0087	N/A
Transfer Points*	0.00110	N/A
Drying	12.00	0.035
Aggregate Stockpile †	0.010	NA

* Use this emission factor for conveyors, feeder/hoppers, bucket elevators, bagging and truck load-out
† This emission factor includes pile loading, pile unloading, and wind action on a sitting storage pile.

Using the above Emission Factors, controlled and uncontrolled as appropriate, calculating the tons per month PM_{10} emissions for crushing, screening, conveyor transfer points and aggregate storage and handling is as follows:

E_{PM10} = (X)(EF lb/ton)(1 ton/2000 lb.)
Where: E_{PM10} = PM_{10} emissions (tons) during a month
X = the amount of material throughput (tons) processed by the unit during a month

iii. The owner or operator shall account for the minor PM_{10} emissions from Insignificant Activities when totaling the monthly plantwide emissions. Since the emissions are minor the owner or operator may use the potential PM_{10} emissions as the monthly emissions. District calculated PM_{10} potential to emit for the heaters is 0.017 pounds per month.

iv. The owner or operator shall maintain monthly records that show the plantwide monthly PM_{10} emissions during each calendar month and consecutive 12-month period utilizing the equations listed above.

[2] The District has decided the only observed and practically controlled emission unit is the Dryer, therefore, only the Dryer has a controlled emission factor.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **PM_{10}**

i. The owner or operator shall report the monthly plantwide PM_{10} emissions, including excess emissions, during each calendar month for each month in the reporting period and consecutive 12 month period.

ii. The owner or operator shall identify all periods in the reporting period when the PM control systems were offline when the associated process was in operation.

iii. The owner or operator shall describe any corrective action taken for each permit deviation.

Emission Unit U1: Production and Processing Equipment

U1 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2
7.08	Standards of Performance for New Process Operations	3.11, 3.12

U1 Equipment:

Emission Point ID	Equipment ID	Emission Point Description	Applicable Regulation	Control ID	Release ID
E1 (IA)	Wet hopper	Transfer: Drop into the Wet Hopper from the Stockpile (50 tph)	7.08	N/A	F1
E2 (IA)	Conveyor 1	Transfer: Wet Hopper drop onto Conveyor 1 (50 tph)	7.08	N/A	F2
E3	Dryer	Drying: Rotary dryer with Hauck natural gas-fired burner (50 tph)	7.08	C1	S1
E4 (IA)	Drop chute 1	Transfer: Gravity-fed transfer chute (100 tph)	7.08	N/A	F4
E5 (IA)	Conveyor 6	Transfer: Crusher drops onto Conveyor 6 (100 tph)	7.08	N/A	F5
E6 (IA)	Elevator 1	Transfer: Drop Chute 1 drops into Elevator 1 (150 tph)	7.08	N/A	F6
E7 (IA)	Surge bin	Transfer: Elevator 1 drop into Surge bin (150 tph)	7.08	N/A	F7
E8 (IA)	Drop chute 2	Transfer: Gravity-fed transfer chute (150 tph)	7.08	N/A	F8
E9 (IA)	Screen A	Screening: Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor (75 tph)	7.08	N/A	F9
E10 (IA)	Screen B	Screening: Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor (75 tph)	7.08	N/A	F10
E11 (IA)	Conveyor 4	Transfer: Drop from Screen A and Screen B onto Conveyor 4 (75 tph)	7.08	N/A	F11
E12 (IA)	Conveyor 5	Transfer: Conveyor 4 drop onto Conveyor 5 (100 tph)	7.08	N/A	F12
E13 (IA)	Crusher	Crushing: Barmack, model 6900 Duopactor, vertical impact crusher, electric motor (100 tph)	7.08	N/A	F13
E14 (IA)	Conveyor 8	Transfer: Screen A and Screen B drop onto Conveyor 8 (20 tph)	7.08	N/A	F14

Emission Point ID	Equipment ID	Emission Point Description	Applicable Regulation	Control ID	Release ID
E15 (IA)	Conveyor 10	Transfer: Conveyor 8 drop onto Conveyor 10 (20 tph)	7.08	N/A	F15
E16 (IA)	Elevator 2	Transfer: Conveyor 10 drop into Elevator 2 (20 tph)	7.08	N/A	F16
E17 (IA)	Derrick screen	Screening: Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor (20 tph)	7.08	N/A	F17
E18 (IA)	Silo 1	Transfer: Derrick screen drop into split-type Silo 1 fill point (30 tph)	7.08	N/A	F18
E19 (IA)	Silo 2	Transfer: Derrick screen drop into split-type Silo 2 fill point (30 tph)	7.08	N/A	F19
E20 (IA)	Silo 3	Transfer: Derrick screen drop into Silo 3 (20 tph)	7.08	N/A	F20
E21 (IA)	Conveyor 11	Transfer: Silo 1 , Silo 2 Silo 3, Silo 4, Silo 5, Silo 6, and Silo 7 drop onto Conveyor 11 (120 tph)	7.08	N/A	F21
E22 (IA)	Elevator 4	Transfer: Conveyor 11 drop into Elevator 4 (50 tph)	7.08	N/A	F22
E23 (IA)	Conveyor 13	Transfer: Elevator 4 drop onto Conveyor 13 (25 tph)	7.08	N/A	F23
E24 (IA)	SWECO screen	Screening: SWECO 4-ft diameter circular screen, electric motor (25 tph)	7.08	N/A	F24
E25 (IA)	Silo 8	Transfer: SWECO screen drop into Silo 8 fill point (25 tph)	7.08	N/A	F25
E26 (IA)	Bagger 1	Transfer: Silo 8 drop into Bagger 1 (45 tph)	7.08	N/A	F26
E27 (IA)	Conveyor 7	Transfer: Screen A and Screen B drop onto Conveyor 7 (30 tph)	7.08	N/A	F27
E28 (IA)	Conveyor 9	Transfer: Conveyor 7 drop onto Conveyor 9 (30 tph)	7.08	N/A	F28
E29 (IA)	Elevator 3	Transfer: Conveyor 9 drop into Elevator 3 (30 tph)	7.08	N/A	F29
E30 (IA)	Silo 4	Transfer: Elevator 3 drop into Silo 4 fill point (25 tph)	7.08	N/A	F30
E31 (IA)	Silo 5	Transfer: Elevator 3 drop into Silo 5 fill point (25 tph)	7.08	N/A	F31
E32 (IA)	Silo 6	Transfer: Elevator 3 drop Silo 6 fill point (25 tph)	7.08	N/A	F32
E33 (IA)	Silo 7	Transfer: Elevator 3 drop into Silo 7 fill point (25 tph)	7.08	N/A	F33
E34 (IA)	Conveyor 12	Transfer: Conveyor 11 drop onto Conveyor 12 (50 tph)	7.08	N/A	F34
E35 (IA)	Bagger 2	Transfer: Conveyor 12 drop into Bagger 2 (25 tph)	7.08	N/A	F35

Emission Point ID	Equipment ID	Emission Point Description	Applicable Regulation	Control ID	Release ID
E36 (IA)	Load-out	Transfer: Conveyor 12 drop into truck Load-out station (25 tph)	7.08	N/A	F36
E37 (IA)	Powerscreen	Screening: Powerscreen Chieftain screen with diesel engine (200 tph)	7.08	N/A	F37

U1 Control Devices:

Control ID	Description	Control Efficiency	Performance Indicator	Stack ID
C1	Pulse jet dust collector with baghouse	99.9% [3]	Weekly VE(s)	S1

[3] The stack test performed 11/15/2016 demonstrated that the source was in compliance with the PM emission standard of 32.37 lb/hr for the Dryer. An uncontrolled emission factor of 18.6 lb PM/ton was concluded from the stack test. A controlled emission factor of 0.043 lb PM/ton and 0.035 lb PM_{10}/ton was concluded from the stack test.

U1 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **Opacity**

i. The owner or operator shall not allow or cause visible emissions to equal or exceed 20% opacity. (Regulation 7.08, section 3.1.1)

b. **PM/PM_{10}**

i. The owner or operator shall not cause or allow the emissions of particulate matter to exceed limits listed in the Table below: [4] (Regulation 7.08, section 3.1.2, Table 1)

Table 2: PM Emission Limits – Processing/Production Equipment

Emission Point ID	Emission Point Description	Design Capacity (tph)	PM Limit (lb/hr)
E1 (IA)	Transfer Drop into the Wet Hopper from the Stockpile	50	32.37
E2 (IA)	Transfer: Wet Hopper drop onto Conveyor 1	50	32.37
E4 (IA)	Transfer: Dryer drops into returns point and meets Crusher returns point	100	36.17
E5 (IA)	Transfer: Crusher drops onto Conveyor 6	100	36.17
E6 (IA)	Transfer: Drop Chute 1 drops into Elevator 1	150	38.59
E7 (IA)	Transfer: Elevator 1 drop into Surge bin	150	38.59
E8 (IA)	Transfer: Surge Bin chute drop into Screen A or Screen B	150	38.59
E9 (IA)	Screening: Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor	75	34.54
E10 (IA)	Screening: Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor	75	34.54
E11 (IA)	Transfer: Drop from Screen A and Screen B onto Conveyor 4	75	34.54
E12 (IA)	Transfer: Conveyor 4 drop onto Conveyor 5	100	36.17

[4] The District has determined that the equipment in Table 2 cannot exceed the PM lb/hr limits under a production bottleneck of 50 tons/hr.

Emission Point ID	Emission Point Description	Design Capacity (tph)	PM Limit (lb/hr)
E13 (IA)	Crushing: Barmack, model 6900 Duopactor, vertical impact crusher, electric motor	100	36.17
E14 (IA)	Transfer: Screen A and Screen B drop onto Conveyor 8	20	23.00
E15 (IA)	Transfer: Conveyor 8 drop onto Conveyor 10	20	23.00
E16 (IA)	Transfer: Conveyor 10 drop into Elevator 2	20	23.00
E17 (IA)	Screening: Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor	20	23.00
E18 (IA)	Transfer: Derrick screen drop into split-type Silo 1 fill point	30	29.57
E19 (IA)	Transfer: Derrick screen drop into split-type Silo 2 fill point	30	29.57
E20 (IA)	Transfer: Powerscreen Chieftain with diesel engine	200	40.41
E21 (IA)	Transfer: Derrick screen drop into Silo 3	120	37.24
E22 (IA)	Transfer: Conveyor 11 drop into Elevator 4	50	32.37
E23 (IA)	Transfer: Elevator 4 drop onto Conveyor 13	25	26.41
E24 (IA)	Screening: SWECO 4-ft diameter circular screen, electric motor	25	26.41
E25 (IA)	Transfer: SWECO screen drop into Silo 8 fill point	25	26.41
E26 (IA)	Transfer: Silo 8 drop into Bagger 1	45	31.83
E27 (IA)	Transfer: Screen A and Screen B drop onto Conveyor 7	30	29.57
E28 (IA)	Transfer: Conveyor 7 drop onto Conveyor 9	30	29.57
E29 (IA)	Transfer: Conveyor 9 drop into Elevator 3	30	29.57
E30 (IA)	Transfer: Elevator 3 drop into Silo 4 fill point	25	26.41
E31 (IA)	Transfer: Elevator 3 drop into Silo 5 fill point	25	26.41
E32 (IA)	Transfer: Elevator 3 drop Silo 6 fill point	25	26.41
E33 (IA)	Transfer: Elevator 3 drop into Silo 7 fill point	25	26.41

Emission Point ID	Emission Point Description	Design Capacity (tph)	PM Limit (lb/hr)
E34 (IA)	Transfer: Conveyor 11 drop onto Conveyor 12	50	32.37
E35 (IA)	Transfer: Conveyor 12 drop into Bagger 2	25	26.41
E36 (IA)	Transfer: Conveyor 12 drop into truck Load-out station	25	26.41
E37 (IA)	Screening: Powerscreen Chieftain screen with diesel engine	200	40.41

ii. The owner or operator shall not cause or allow the emissions of particulate matter to exceed limits listed in the Table below: [5] (Regulation 7.08, section 3.1.2, Table 1)

Table 3: PM Emission Limits – Dryer

Emission Point	Description	Design Capacity (tph)	PM Limit (lb/hr)
E3	Drying: Rotary dryer with Hauck natural gas-fired burner	50	32.37

iii. The owner or operator shall operate and maintain the associated control device (baghouse C1)at all times an associated emission point (Dryer E3) is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice to meet the standards. (Regulation 2.17, section 5.1)

iv. For additional PM_{10} standards see Emission Unit Plantwide.

c. **Unit Operation**

i. The owner or operator shall not allow the diesel engines to be located in one place onsite for more than 12 consecutive months.[6] (Regulation 2.17, section 5.1)

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

[5] The District has determined that the equipment in this unit requires a control device to meet the PM lb/hr limit under the production bottleneck of 50 tons/hr.

[6] If the engines are located on site at one location for 12 consecutive months at any one time then they are considered stationary and not mobile and the emissions for NOx, CO, SO_2, and VOC count toward the source's potential to emit for major source determination.

a. **Opacity**

i. The owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. The owner or operator shall maintain records, weekly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given week, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. **PM/PM_{10}**

i. The owner or operator shall maintain daily records of the type and amount of product transferred.

ii. The owner or operator shall maintain daily records of the hours of operation of the equipment.

iii. For the Dryer (E3): If there is any time that the control device is bypassed or not in operation when the process is operating, then the owner or operator shall keep a record of the following for each bypass event:

1) Date;

2) Start time and stop time;

3) Identification of the control device and process equipment;

4) PM emissions during the bypass in lb/hr;

5) Summary of the cause or reason for each bypass event;

6) Corrective action taken to minimize the extent or duration of the bypass event; and

7) Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall maintain a monthly maintenance log for the emission filters and containment methods to include all maintenance performed, including dates and duration of any control device downtime or bypasses.

v. For the Dryer (E3): The owner or operator shall calculate any bypass event PM emissions based on the material throughput, duration of event, and emission factors based on the stack test shown below in the Table below unless another method is approved in writing by the District:

Table 4: Dryer Uncontrolled Emissions Factor

Emission Source	**Uncontrolled PM Emission Factor** (lb/ton)
Dryer	18.6[7]

Equation 1: $E_{PM} = (X)(EF \text{ lb/ton})$

Where: E_{PM} = uncontrolled PM emissions (pounds) during a bypass event

X = the amount of material throughput (tons) processed by the unit during a bypass event

vi. A description of the measures implemented to prevent reoccurrence of the situation that resulted in bypassing the emission filters and containment methods.

vii. For additional PM_{10} monitoring and record keeping requirements see Emission Unit Plantwide.

c. **Unit Operation**

i. The owner or operator shall, monthly, maintain records of any change in location of the diesel engine associated with the Powerscreen Chieftain (E37) or a declaration that no change in location occurred.

ii. The owner or operator shall monthly maintain records that show the quantity (in gallons) of diesel fuel used during each calendar month and consecutive 12-month period.

iii. If the diesel engine associated with the Powerscreen Chieftain (E37) is located in the same spot for more than 12 consecutive months, then the owner or operator shall calculate PM_{10} emissions from the diesel engine powering the Powerscreen Chieftain utilizing diesel fuel throughput, AP-42, table 3.3-1, Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines (diesel engines less than or equal to 600-hp), and the

[7] The uncontrolled PM lb/ton emission factor for the Dryer is based on stack test performed 11/15/2016.

formula shown below, unless another method is approved in writing by the District:[8]

E_{PM} = (0.31 lb. PM_{10}/MMBtu) (0.139 MMBtu/gal) (X) (1 ton/2000 lb.)
Where: E_{PM} = PM_{10} emissions (tons) during a consecutive 12-month period
X = the amount of diesel fuel (gallons) combusted, in the cranking engine, during a consecutive 12-month period

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **Opacity**

i. The owner or operator shall report any deviation from the requirement to perform weekly visible emission surveys or Method 9 tests;

ii. The owner or operator shall report any deviation from the requirement to record the results of each VE survey and Method 9 test performed;

iii. The owner or operator shall report the number, date, and time of each VE Survey where visible emissions were observed beyond the opacity standard and the results of the Method 9 test performed;

iv. The owner or operator shall identify all periods of exceedance of the opacity standard; and

v. The owner or operator shall provide a description of any corrective actions taken for each exceedance of the opacity standard.

b. **PM/PM_{10}**

i. There are no reporting requirements related to the lb/hr emission standard for all the equipment listed in this emission unit with the exception of the Dryer (E3).

ii. For the Dryer (E3): The owner or operator shall report the following information regarding PM bypasses in the annual compliance reports.

1) Number of times the PM vent stream bypasses the control device and is vented to the atmosphere;

2) Duration of each bypass to the atmosphere;

[8] If the engines are located on site at one location for 12 consecutive months at any one time then they are considered stationary and not mobile and the emissions for NOx, CO, SO_2, and VOC count toward the source's potential to emit for major source determination.

3) The calculated lb/hr PM emissions for each bypass.

iii. For additional PM_{10} reporting requirements see Emission Unit Plantwide.

c. **Unit Operation**

i. The owner or operator shall report any change in location of the diesel engines or a declaration that no change in location occurred.

S4. **Testing** (Regulation 2.17, section 5.2)

a. **PM/PM_{10}**

i. The owner or operator shall comply with all stack testing requirements for C1. (See Attachment A)

Emission Unit U2: Aggregate Stockpiles

U2 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	2.4
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2
7.08	Standards of Performance for New Process Operations	3.11, 3.12

U2 Equipment:

Emission Point ID	Equipment ID	Emission Point Description	Applicable Regulation	Control ID	Release ID
E38 (IA)	Aggregate Stockpile	Wind action on the sitting stockpile, pile loading, pile unloading (181'by 115')x3	7.08, 1.14	N/A	F38

* This emission factor includes pile loading, pile unloading, and wind action on a sitting storage pile.

U2 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **Opacity**

i. The owner or operator shall not allow visible emissions to equal or exceed 20% opacity. (Regulation 7.08, section 3.1.1)

ii. The owner or operator shall not allow visible fugitive emissions beyond the lot line of the property on which the emissions originate. (Regulation 1.14, section 2.4)

b. **PM/PM_{10}**

i. The owner or operator shall not cause or allow the emissions of particulate matter to exceed limits listed in the Table below: [9] (Regulation 7.08, section 3.1.2, Table 1)

Table 5: PM Emission Limits – Aggregate Stockpile

Emission Point ID	Emission Point Description	Design Capacity (tph)	PM Limit (lb/hr)
E38 (IA)	Aggregate Stockpile: Wind action on the sitting stockpile, pile loading, pile unloading (181'by 115')x3	50	32.37

ii. The owner or operator shall not allow a road to be used without taking reasonable precautions to prevent particulate matter from becoming airborne beyond the work site. Such precautions shall include, where applicable, but shall not be limited to the following: (Regulation 1.14, section 2.1)

1) Applying and maintaining asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts, (Regulation 1.14, section 2.1.2)

2) Covering at all times, except when loading and unloading, open bodied trucks transporting materials likely to become airborne, (Regulation 1.14, section 2.1.4)

3) Maintaining paved roadways in a clean condition, (Regulation 1.14, section 2.1.6)

4) Removing earth or other material from paved streets which earth or other material has been transported thereto by trucking or

[9] The District has determined that the equipment in Table 4 cannot exceed the PM lb/hr limits uncontrolled.

earth moving equipment or erosion by water. (Regulation 1.14, section 2.1.7)

iii. For additional PM_{10} standards see Emission Unit Plantwide.

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **Opacity**

i. The owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation, of the emission points. No more than four emission points shall be observed simultaneously. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation.

iii. The owner or operator shall maintain records, weekly, of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed. If an emission point is not being operated during a given week, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

b. **PM/PM_{10}**

i. The owner or operator shall maintain daily records of the type and amount of product transferred.

ii. The owner or operator shall maintain daily records of the hours of operation of the equipment.

iii. For additional PM_{10} monitoring and record keeping requirements see Emission Unit Plantwide.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **Opacity**

i. The owner or operator shall report any deviation from the requirement to perform weekly visible emission surveys or Method 9 tests;

ii. The owner or operator shall report any deviation from the requirement to record the results of each VE survey and Method 9 test performed;

iii. The owner or operator shall report the number, date, and time of each VE Survey where visible emissions were observed beyond the opacity standard and the results of the Method 9 test performed;

iv. The owner or operator shall identify all periods of exceedance of the opacity standard; and

v. The owner or operator shall provide a description of any corrective actions taken for each exceedance of the opacity standard.

b. **PM/PM_{10}**

i. There are no reporting requirements related to the lb/hr emission standard for all the equipment listed in this emission unit.

ii. For additional PM_{10} reporting requirements see Emission Unit Plantwide.

Emission Unit U3: Storage Tank

U3 Applicable Regulations:

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permits	5.1, 5.2
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	1 through 4

U3 Equipment:

Equipment	Emission Point	Description	Applicable Regulation	Control ID	Release ID
E39 (IA)	Storage Tank	Diesel fuel storage tank, 500 gallon [10]	2.17, 7.12	N/A	F39

[10] The tanks are not subject 40 CFR 60 Subpart Kb because tank capacity is less than 19,812 gallons and the vapor pressure is less than the required 15.0 kPa.

U3 Specific Conditions

S1. **Standards** (Regulation 2.17, section 5.1)

a. **VOC**

i. The owner or operator shall not store materials with an as stored vapor pressure of greater than or equal to 1.5 psia in the storage vessel(s), unless the storage tank is equipped with a permanent submerged fill pipe.[11] (Regulation 7.12, section 3.3)

S2. **Monitoring and Record Keeping** (Regulation 2.17, section 5.2)

The owner or operator shall maintain the following records for a minimum of 5 years and make the records readily available to the District upon request.

a. **VOC**

i. The owner or operator of the storage vessel(s) shall maintain records of the material stored and the vapor pressure in each storage vessel and if the contents of the storage vessel(s) are changed a record shall be made of the new contents, the date of the change, and the new vapor pressure in order to demonstrate compliance.

ii. The owner or operator shall keep a record that shows if the storage vessel is equipped with a submerged fill pipe. Submerged fill pipe means any fill pipe the discharge of which is entirely submerged when the liquid level is 6 inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean every fill pipe the discharge opening of which is entirely submerged when the liquid level is 2 times the fill pipe diameter above the bottom of the tank.

S3. **Reporting** (Regulation 2.17, section 5.2)

The owner or operator shall report the following information, as required by General Condition 12:

a. **VOC**

i. There are no VOC reporting requirements for this emission unit related to Regulation 7.12.

[11] This tank is exclusively used for diesel fuel storage. The vapor pressure of diesel fuel is less than 1.5 psia.

Insignificant Activities

Equipment ID	Emission Point Description[12]	Quantity	PTE (tpy)	Regulation Basis
Wet hopper	Aggregate wet hopper, 50 tph (E1)	1	PM_{10}= 0.24 PM= 0.66	Regulation 1.02
Elevator 1	Bucket Elevator with electric motor, 150 tph (E6)	1	PM_{10}= 0.72 PM= 1.97	Regulation 1.02
Elevator 2	Bucket Elevator with electric motor, 20 tph (E16)	1	PM_{10}= 0.10 PM= 0.26	Regulation 1.02
Elevator 3	Bucket Elevator with electric motor, 30 tph (E29)	1	PM_{10}= 0.14 PM= 0.39	Regulation 1.02
Elevator 4	Bucket Elevator with electric motor, 50 tph (E22)	1	PM_{10}= 0.24 PM= 0.66	Regulation 1.02
Surge bin	Aggregate surge bin, 150 tph (E7)	1	PM_{10}= 0.72 PM= 1.97	Regulation 1.02
Crusher	Barmac, model 6900 Duopactor, vertical impact crusher, electric motor, 100 tph (E13)	1	PM_{10}= 0.53 PM= 1.18	Regulation 1.02
Screen A	Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor, 75 tph (E9)	1	PM_{10}= 1.91 PM= 5.48	Regulation 1.02
Screen B	Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor, 75 tph (E10)	1	PM_{10}= 1.91 PM= 5.48	Regulation 1.02
Derrick Screen	Derrick Manufacturing, 3'x10', double deck, vibrating screen, electric motor, 20 tph (E17)	1	PM_{10}= 0.76 PM= 2.19	Regulation 1.02
SWECO Screen	SWECO 4-ft diameter circular screen with electric motor, 25 tph (E24)	1	PM_{10}= 0.95 PM= 2.74	Regulation 1.02
Powerscreen	Powerscreen Chieftain, 3'x10', double deck, vibrating screen, diesel motor, 200 tph (E37)	1	PM_{10}= 1.91 PM= 5.48	Regulation 1.02
Drop Chute 1	Gravity-fed transfer chute, 100 tph (E4)	1	PM_{10}= 0.48 PM= 1.31	Regulation 1.02
Drop Chute 2	Gravity-fed transfer chute, 150 tph (E8)	1	PM_{10}= 0.72 PM= 1.97	Regulation 1.02
Conveyor 1	Conveyor/Stacker with electric	1	PM_{10}= 0.24	Regulation 1.02

[12] For the engines associated with forklifts, front-end loaders, and spotter trucks; the District has determined that these are mobile and not stationary and do not count for PTE purposes in determining major source status. These emissions also do not need to be accounted for in the plantwide emission limits to show compliance with this permit.

Equipment ID	Emission Point Description[12]	Quantity	PTE (tpy)	Regulation Basis
	motor, 50 tph (E2)		PM= 0.66	
Conveyor 4	Conveyor/Stacker with electric motor, 75 tph (E11)	1	PM_{10}= 0.36 PM= 0.98	Regulation 1.02
Conveyor 5	Conveyor/Stacker with electric motor, 100 tph (E12)	1	PM_{10}= 0.48 PM= 1.31	Regulation 1.02
Conveyor 6	Conveyor/Stacker with electric motor, 100 tph (E5)	1	PM_{10}= 0.48 PM= 1.31	Regulation 1.02
Conveyor 7	Conveyor/Stacker with electric motor, 30 tph (E27)	1	PM_{10}= 0.14 PM= 0.39	Regulation 1.02
Conveyor 8	Conveyor/Stacker with electric motor, 20 tph (E14)	1	PM_{10}= 0.10 PM= 0.26	Regulation 1.02
Conveyor 9	Conveyor/Stacker with electric motor, 30 tph (E28)	1	PM_{10}= 0.14 PM= 0.39	Regulation 1.02
Conveyor 10	Conveyor/Stacker with electric motor, 20 tph (E15)	1	PM_{10}= 0.10 PM= 0.26	Regulation 1.02
Conveyor 11	Conveyor/Stacker with electric motor, 120 tph (E21)	1	PM_{10}= 0.57 PM= 1.57	Regulation 1.02
Conveyor 12	Conveyor/Stacker with electric motor, 50 tph (E34)	1	PM_{10}= 0.24 PM= 0.66	Regulation 1.02
Conveyor 13	Conveyor/Stacker with electric motor, 25 tph (E23)	1	PM_{10}= 0.12 PM= 0.33	Regulation 1.02
Silo 1	Split-type processed material storage silo, 30 tph (E18)	1	PM_{10}= 0.14 PM= 0.39	Regulation 1.02
Silo 2	Split-type processed material storage silo, 30 tph (E19)	1	PM_{10}= 0.14 PM= 0.39	Regulation 1.02
Silo 3	Processed coarse material storage silo, 20 tph (E20)	1	PM_{10}= 0.10 PM= 0.26	Regulation 1.02
Silo 4	Processed fine material storage silo, 25 tph (E30)	1	PM_{10}= 0.12 PM= 0.33	Regulation 1.02
Silo 5	Processed medium material storage silo, 25 tph (E31)	1	PM_{10}= 0.12 PM= 0.33	Regulation 1.02
Silo 6	Processed material storage silo, 25 tph (E32)	1	PM_{10}= 0.12 PM= 0.33	Regulation 1.02
Silo 7	Processed material storage silo, 25 tph (E33)	1	PM_{10}= 0.12 PM= 0.33	Regulation 1.02
Silo 8	Processed material storage silo, 25 tph (E25)	1	PM_{10}= 0.12 PM= 0.33	Regulation 1.02
Bagger 1	MHE/Choice Packaging, plug stack, air packer, bagging machine, electric motor, 45 tph (E26)	1	PM_{10}= 0.22 PM= 0.59	Regulation 1.02

Equipment ID	Emission Point Description[12]	Quantity	PTE (tpy)	Regulation Basis
Bagger 2	MHE/Choice Packaging, plug stack, air packer, bagging machine, electric motor, 25 tph (E35)	1	PM_{10}= 0.12 PM= 0.33	Regulation 1.02
Load-out Station	Truck load-out station, 25 tph (E36)	1	PM_{10}= 0.12 PM= 0.33	Regulation 1.02
Aggregate Stockpile	Aggregate storage pile, 181'x115' (E38)	1	PM_{10}= 2.16 PM= 4.50	Regulation 1.02
Storage tank	Diesel fuel storage tank, 500 gallons (E39)	1	VOC=0.0004	Regulation 1.02
Area heaters	Room/area heaters, direct fire (0.08 MMBtu/hr)	2	PM_{10}= 0.017 NOx = 0.01	Regulation 1.02

1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.

2) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.

3) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5) The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.

6) The District has determined that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

7) There are two MHE/Choice Packaging, plug stack, air packer, bagging machine, electric motor (12 tph) on site that do not emit any regulated air pollutants.

Idled Equipment:

The owner or operator must inform the District prior to reinstating any of these idled units.

Emission Point	Description	Capacity	Stack ID	Install Date
Mixer	Cement Mixer, mobile, diesel engine	30 cyd	N/A	2012

Fee Comment

1. On May 15, 2013, the Board approved revisions to Regulation 2.08, which implemented a new fee structure. As a result, Universal Minerals Kentucky, Inc. will be required to pay annual fees.

2. The administrative fee in the amount of $516.52 due to an ownership change on 15 January 2010 is required to be paid prior to the issuance of this permit renewal.

Attachment A - Stack Performance Testing

S1. **Testing** (Regulation 2.17, section 5.2)

a. **General Requirements**

i. Devices of adequately similar design may be represented by a common performance test contingent upon review and approval of the testing protocol by the District. The owner or operator may submit a signature guarantee of the control efficiency from the control-device manufacturer to the District for approval as an alternative to stack testing.

ii. The owner or operator shall use the most recent District-accepted performance test results or guaranteed performance to demonstrate compliance with the emission limits and in the annual emission inventory reporting.

iii. The District may require retesting if there is reasonable belief that currently-used emission factors or control efficiencies do not accurately reflect the actual performance of the device. If performance testing is not completed by the required date, then the company shall calculate emissions using expired test result data, methods such as EPA-approved emission factors and guidance documents such as EIIP and AP-42, or other methods upon written approval by the District, whichever results in the greater (more conservative) emissions.

iv. If the control device is not hard piped to the process equipment, the owner or operator shall perform a capture efficiency test using EPA guidelines. In lieu of performing a capture efficiency test, the owner or operator may submit a reasonable estimate of capture efficiency with thorough justification subject to approval by the District.

v. Before conducting a performance test, the owner or operator shall submit a written test plan. The plan shall include the EPA test methods that will be used for testing, the process operating parameters that will be monitored during the performance test, and the control device performance indicators that will be monitored during the performance test. The test plans shall be furnished to the District at least 30 days prior to the actual date of the performance test. **Error! Reference source not found.** to this permit provides information that must be submitted in the protocol.

vi. The owner or operator shall be responsible for obtaining and analyzing audit samples when the EPA Reference Method is used to analyze samples, to demonstrate compliance with the source's emission regulation.

The audit samples shall be available for verification by the District during the on-site testing.[13]

vii. The owner or operator shall provide the District at least 10 days prior notice of any performance test to afford the District the opportunity to have an observer present.

viii. The owner or operator shall furnish the District with a written report of the results of the performance test within 60 days following the actual date of completion of the performance test.

b. **Opacity**

The owner or operator shall demonstrate compliance with the opacity limit by initially conducting a test in accordance with Method 9 of 40 CFR 60 Appendix A at the same time as the Method 5 PM performance test. The test shall be performed at maximum capacity or allowable/permitted capacity or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test at these conditions may necessitate a re-test. The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages).

c. **PM/PM_{10}**

i. To test PM emissions the owner or operator shall perform an EPA Reference Method 5 PM performance test on the inlet and outlet of the control device or emission point to determine the emission rate and control efficiency. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions, may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.

ii. To test PM_{10} emissions the owner or operator shall perform an EPA Reference Method 201A performance test on the inlet and outlet of the control device or emission point to determine the emission rate and control efficiency. The test shall be performed at 90% or higher of maximum capacity, or allowable/permitted capacity, or at a level of capacity which results in the greatest emissions and is representative of the operations. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which resulted in the greatest emissions,

[13] Per an EPA rule change ("Restructuring of the Stationary Source Audit Program" Federal Register 75:176 (September 13,2010) pp 55636-55657), source became responsible for obtaining the audit samples directly from accredited audit sample suppliers, not the regulatory agencies.

may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.

Attachment B - Protocol Checklist for a Performance Test

A completed protocol should include the following information:

- ☐ 1. Facility name, location, and ID #;
- ☐ 2. Responsible Official and environmental contact names;
- ☐ 3. Permit numbers that are requiring the test to be conducted;
- ☐ 4. Test methods to be used (i.e. EPA Method 1, 2, 3, 4, and 5);
- ☐ 5. Alternative test methods or description of modifications to the test methods to be used;
- ☐ 6. Purpose of the test including equipment and pollutant to be tested; the purpose may be described in the permit that requires the test to be conducted or may be to show compliance with a federal regulation or emission standard;
- ☐ 7. Tentative test dates (These may change but the District will need final notice at least 10 days in advance of the actual test dates in order to arrange for observation.);
- ☐ 8. Maximum rated production capacity of the system;
- ☐ 9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits);
- ☐ 10.Method to be used for determining rate of production during the performance test;
- ☐ 11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance;
- ☐ 12. Description of normal operation cycles;
- ☐ 13. Discussion of operating conditions that tend to cause worse case emissions; it is especially important to clarify this if worst case emissions do not come from the maximum production rate;
- ☐ 14. Process flow diagram;
- ☐ 15. The type and manufacturer of the control equipment, if any;
- ☐ 16. The control equipment (baghouse, scrubber, condenser, etc.) parameter to be monitored and recorded during the performance test. Note that this data will be used to ensure representative operation during subsequent operations. These parameters can include pressure drops, flow rates, pH, and temperature. The values achieved during the test may be required during subsequent operations to describe what pressure drops, etcetera, are indicative of good operating performance; and
- ☐ 17. How quality assurance and accuracy of the data will be maintained, including;
    - o Sample identification and chain-of-custody procedures
    - o If audit samples are required for this test method, audit sample provider and number of audit samples to be used
- ☐ 18. Pipe, duct, stack, or flue diameter to be tested;
- ☐ 19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet;
- ☐ 20. Determine number of traverse points to be tested for outlet and additionally for inlet if required using Appendix A-1 to 40 CFR Part 60;
    - o Method 1 if stack diameter is >12"
    - o Method 1a if stack diameter is greater than or equal to 4" and less than 12"
    - o Alternate method of determination for <4"
    - o If a sample location at least two stack or duct diameters downstream and half a diameter upstream from any flow disturbance is not available then an alternative procedure is available for determining the acceptability of a measurement location. This procedure described in Method 1, Section 11.5 allows for the determination of gas flow angles at the sampling points and comparison of the measured results with acceptability criteria.
- ☐ 21. The Stack Test Review fee shall be submitted with each stack test protocol.